

HVAC PROJECT SUMMARY OF COST AND SCOPE CHANGES

1. Central Juvenile Hall/Juvenile Courts Chiller Replacement Project (Phase I) – The scope of work was to replace two non-functioning chillers and the main electrical/mechanical control center to support the new chiller equipment. The replacement of the chillers was completed in May 2002, within the **\$200,000** budget allocation of October 23, 2001.
2. District Attorney HVAC Replacement Project – The scope of work was to replace the building's HVAC equipment, controls, ducting, and air balance the system. This project was completed in March, 2003 at a cost of **\$803,000** which is higher than the revised amount of \$750,000 included in the July 16, 2002 Report to the Board. The additional cost is for additional electrical upgrades and fire code compliance.
3. Museum HVAC Replacement Project – The original scope of work was to evaluate and replace the HVAC equipment. After engineering review of the existing HVAC equipment, a new scope of work was developed which would include replacing the entire cold storage system as well as the possible replacement/reconfiguration of the air ducting system. In addition, the rezoning and air balancing of the entire system would also be necessary. This change in scope increased the project budget from \$500,000 to \$750,000, as reported in the Report presented to the Board on July 16, 2002. In finalizing the design it has been determined that the HVAC control system and the cooling towers should also be replaced. This added scope of work necessitates increasing the budget from \$750,000, to **\$1,000,400**.
4. Information Services HVAC Project – The scope of work is to replace the basement's chillers. This project is under construction at a cost of **\$366,800**, which is higher than the \$300,000 included in the July 16, 2002, Report to the Board. The cost increased as a result of required project phasing in order to avoid any service disruption and construction inflation from when the original estimate was developed.
5. Central Detention Center HVAC Project (Phase I) – The scope of work is to replace the chillers, cooling towers, pumps, and related controls. This project is under construction at a cost of **\$670,150**, which is well within the project budget of \$1,100,000 included in the July 16, 2002, Report to the Board. The reduction in cost is attributed to a favorable bidding climate at the time of bid opening; and an overly conservative cost estimate as listed in the July 16, 2002 Report to the Board.
6. Fontana Complex HVAC Project – The original scope of work for this project was developed prior to the Mathaudhu Engineering study and consisted only of the replacement of one chiller, one cooling tower and controls with an estimated budget of \$400,000. After receiving the input from the Mathaudhu report, the scope increased to include installation of a new boiler and new air handlers, but the budget amount was not increased. Subsequently, the budget for this scope of work was increased to \$600,000 as reported in the July 16, 2002, Report to the Board. On August 6, 2002 the Board awarded the design contract. As the design for this project progressed, the scope of work became more fully defined and

additional problems and deficiencies were identified. The new scope of work includes the replacement of two chillers, two cooling towers, two boilers, four pumps, four air handlers, digital direct control (DDC) system, ductwork, new piping, and associated electrical and structural modifications. These changes to the project scope have increased the total project costs from \$600,000 to the updated figure of approximately **\$1,400,000**.

7. Central Juvenile Hall/Juvenile Courts HVAC Project (Phase II) – The scope of work is to replace air handlers, controls and rezoning and balancing of the north section of the Central Juvenile Hall HVAC system. This project is about to start design and remains budgeted at **\$600,000**. The July 2002 budget for this project should have been listed in Attachment "A" as \$600,000 instead of \$1,000,000 and has been adjusted accordingly.
8. Central Juvenile Hall/Juvenile Courts – Replace Air Handler and Controls (Phase II) - This project was included in the 2001-02 CIP budget and inadvertently duplicated in the 2002-03 CIP budget. The **\$600,000** appropriated for 2002-03 is being used to help fully fund the 2001-02 and 2002-03 HVAC projects.
9. Central Detention Center – Replace HVAC Controls and Air Balance (Phase II) – The scope of work is to repair the existing Variable Air Volume boxes and controls and to air balance the system. The design consultant selection process is underway and the budget estimate is **\$500,000**.
10. Chino Courthouse – Replace Air Handlers – The scope of work is to replace three air handlers. A design consultant has been selected and is currently on hold pending the presentation of this report to the Board. The total project budget of **\$480,000** is proposed for re-allocation to help fully fund higher priority 2001-02 and 2002-03 HVAC projects.
11. Information Services – Replace HVAC First and Second Floor – The scope of work is to replace the existing Built Up System with a high efficiency water cooled chiller, cooling tower, water pumps, coils, install a new DDC system and balance the system. The proposal made as part of this report is to continue with the design phase of this project, so a more comprehensive estimate of the project costs may be determined. The project budget of **\$790,000** is being used to help fully fund higher priority 2001-02 and 2002-03 HVAC projects.
12. Redlands Courthouse – Replace HVAC – The scope of work is to replace the existing Split System with package units, modify existing ductwork and air balance the system. The proposal made as part of this report is to continue with the design phase of this project, so a more comprehensive estimate of the project costs may be determined. The project budget of **\$310,000** is being used to help fully fund higher priority 2001-02 and 2002-03 HVAC projects.